

L 17938-63

EPR/EPP(c)/EWT(m)/BDS AFFTC/RPL Ps-h/Pr-h RM/WW/JW/JWD/H

ACCESSION NR: AT3006100

S/2938/63/000/000/0528/0534

AUTHORS: Andreyev, K. K.; Gorbunov, V. V.

74

TITLE: Thermostability of explosive crystals

SOURCE: Teoriya vzryvchayushchikh veshchestv, sbornik statey, 1963  
528-534

TOPIC TAGS: explosive, explosive crystal, cyclonite, potassium picrate, TNT, picric acid, tetryl, heat shock (expl), PETN

ABSTRACT: Authors developed a methodology for evaluating the sensitivity of explosive crystals to thermal shock produced by heated gas. The sensitivity to thermal shock of the crystals of a number of explosives was determined at a furnace temperature of 300-1100C. Cyclonite and potassium picrate crystals are the most prone to split. Crystals of TNT, picric acid and tetryl are slightly sensitive to heat shock. The effect of PETN and cyclonite crystal sizes upon their sensitivity to heat shock at a furnace temperature of 500 and 700C were studied. The sensitivity increases with an increase in

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ACCESSION NR:	AT3006100					
the size of these crystals. The findings were compared with some regularities which were observed during the transition of the explosive's burning in a closed volume into explosion. Orig. art. has: 3 figures.						
ASSOCIATION: None						
SUBMITTED: 00	DATE ACQ:	14Jun63	ENCL:	00		
SUB CODE: AR, PH	NO REF Sov:	003	OTHER:	000		
Card 2/2						

L 17937-63

EPP(c)/EWT(m)/BDS AFFTO/RPL Pr-4 WW/JW/JWD/H

S/2938/63/000/000/0534/0539

60

ACCESSION NR: AT3006101

AUTHOR: Andreyev, K. K.

TITLE: Transition of combustion of explosives into detonation

SOURCE: Teoriya very#vchaty#kh veshchestv, sbornik statey, 1963  
534-539

TOPIC TAGS: explosive , solid explosive , detonation of explosive

ABSTRACT: The principle conditions necessary for generating self-accelerating combustion and subsequent transition to detonation of solid explosives in powder form were discussed. Since there is an analogy between the inclination of combustion to pass over into detonation and the detonation power of the powdered explosive, the penetration of the gaseous combustion products into the depth of the charge plays a substantial role not only in the origin of the detonation but also in its propagation. The effects of particle size and charge density on this penetration are discussed. Orig. art.

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APPROVED FOR RELEASE: 03/20/2001

ACCESSION NR: AP3002932

S/0076/63/037/008/1304/1310

AUTHOR: Andreyev, K. K.; Chuyko, S. V.

TITLE: Study on the transition to detonation in the combustion of explosives.  
I. Combustion of powdered explosives at elevated pressures

SOURCE: Zhurnal fizicheskoy khimii, v. 37, no. 6, 1963, 1304-1310

TOPIC TAGS: powdered explosives, PETN, RDX, tetryl, accelerated combustion, high pressures, grain size, density

ABSTRACT: PETN, RDX, and tetryl explosive charges were used to determine the effect of grain size and density on the increase of combustion rate obtainable at pressures up to 1000 atm. Crystalline explosives of eight different average particle sizes ranging from 5 to  $730\mu$  were compacted into plexiglass tubes to densities of 0.28--1. The gas permeability of the specimens was determined and plotted against the density. The combustion rate was determined in a

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ACCESSION NR: AP3002932

constant-pressure bomb filled with nitrogen. The combustion process was studied with a photoregister. Burning-rate-versus-pressure curves showed that at low pressures the combustion rate of powdered low-density explosives is the same as that of cast explosives. At critical pressure, a transition from normal to accelerated combustion occurred. The critical transition pressure increased with increasing density and decreased with increasing particle size. In PETN, the transition takes place at lower pressures than in the faster-burning RDX. PETN (200- $\mu$  particle size and 1.117 g/cm<sup>3</sup> in density) burned under 50 atm at the normal rate, but RDX under the same conditions burned ten times faster than the normal rate. The average burning rate under the accelerated regime was 10--100 times higher than the normal rate. The accelerated rate increased with increasing pressure and was a function of particle size and density. The transition from deflagration to detonation was not observed in the pressure range studied. The relative combustion stability of powdered explosives under elevated pressures depended primarily on the nitrogen gas concentration in the explosive. Accelerated combustion is discussed in terms of a mechanism involving the

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ACCESSION NR: AP3002932

penetration of combustion products into the porous explosive. Orig. art. has:  
6 figures.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical  
Physics AN SSSR)

SUBMITTED: 09May63 DATE ACQ: 18Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 004 OTHER: 000

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L 18942-63  
Pa-4/Pc-4/Pr-4

EPR/EWA(b)/ENP(j)/EPP(c)/ENT(m)/BDS AFFTC/RPL Ps-4/  
RM/WW/JW/MAY/JWD/H

ACCESSION NR: AP3006613

S/0076/63/037/009/1958/1965

88

86

AUTHOR: Andreyev, K. K.; Gorbunov, V. V.

TITLE: Studies on the deflagration-to-detonation transition of explosives. 2. Combustion stability of powdered explosives.

SOURCE: Zh. fizicheskoy khimii, v. 37, no. 9, 1963, 1958-1965

TOPIC TAGS: combustion, combustion stability, stability, solid explosive, explosive, propellant, deflagration to detonation transition, powdered explosive, pressed explosive, accelerated combustion

ABSTRACT: The combustion stability (susceptibility of solid explosives to deflagration-to-detonation transition) of pressed hexogen, trotyl, pentaerythritol tetranitrate (PETN), and mercury fulminate specimens has been studied as a function of density, particle size, and charge length. The experiments were conducted in a pressure bomb equipped with a strain-gage-type pressure sensor of 18-20 kc frequency capable of recording oscillographically

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ACCESSION NR: AP3006613

signals of 1 msec duration. Powdered explosives of different particle size (10—100  $\mu$ ) were compacted to the desired density in a plexiglass tube 10 mm in diameter and 30 mm long. The charge was ignited with black powder. Certain of the results are shown in Figs. 1—3 of the Enclosure. Trotyl was found to be the most stable of the explosives tested: specimens of density 0.73 burned normally at the same rate as specimens of density 0.96. At a density of 0.67 accelerated combustion was observed after 0.6 sec, and total combustion lasted 1.4 sec as compared to 4 sec under the normal combustion regime. Hexogen was considerably less stable and burned normally only at density 0.98; accelerated combustion, followed by detonation, was observed with specimens of density 0.93. PETN of density 0.82 exhibited accelerated combustion and detonation. Mercury fulminate was most susceptible to detonation. The combustion stability of explosives at a given density decreased with increasing particle size (see Fig. 3 of the Enclosure). The considerable differences observed in the combustion stability of individual explosives is apparently caused by the permeability of the charge, which controls flame penetration into the explosive,

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ACCESSION NR: AP3006613

as well as by the combustion-gas temperature; the latter is in turn controlled by the reaction rate and heat release in the individual reaction. The higher the temperature of the gas, the more readily it penetrates into the charge. The method described may be used generally to evaluate the combustion stability of solid explosives. Orig. art. has: 7 figures and 1 table.

ASSOCIATION: Moskovskiy khimiko-tehnologicheskiy institut im. D. I. Mendeleyeva (Moscow Institute of Chemical Technology)

SUBMITTED: 28Apr62 DATE ACQ: 30Sep63 ENCL: 02

SUB CODE: PR, AS NO REF SOV: 000 OTHER: 001

Card 3/5

ANDREYEV, K.K.; FLYASUNOV, M.S.

Chemical-kinetic basis for the difference between secondary  
and initiating explosive substances. Zhur. VNIIO 8 no.5:58-  
587 '63. (MIRA 17:1)

I. Moskovskiy khimiko-tehnologicheskiy institut imeni  
D.I. Mendeleyeva.

ANDREYEV, K.K.; GORBUNOV, V.V.

Effect of pressure on the stability of combustion of  
explosive materials. Zhur. VKHO 8 no.5:592 '63.

(MIRA 17:1)

I. Moskovskiy khimiko-tehnologicheskiy institut imeni  
D.I. Mendeleyeva.

L 37703-65

ACCESSION NR: AP5006706

S/0076/65/039/002/0534/0536

18  
B

AUTHOR: Zel'dovich, Ya. B.; Semenov, N. N.; Khariton, Yu. B.; Belyayev, A. F.; Clarkova, A. D.; Kondrikov, D. N.; Orlova, Ye. Yu.; Svetlov, B. S.

TITLE: Obituary of Konstantin Konstantinovich Andreyev

SOURCE: Zhurnal fizicheskoy khimii, v. 39, no. 2, 1965, 534-536

TOPIC TAGS: explosive theory, explosive combustion, detonation, critical combustion diameter, nitro derivative

ABSTRACT: Konstantin Konstantinovich Andreyev, Doctor of Engineering Sciences, died on 9 May 1964. Son of a physician, he was born in February 1905. Prior to his graduation in 1929 from the khimicheskiy fakul'tet Moskovskogo vysshego tekhnicheskogo uchiliishcha (Chemical Faculty of the Moscow Higher Technical School), he spent approximately one year at the Physical Chemistry Institute of Berlin University under the guidance of the well known German physical chemist Prof. P. Gunther. After several years spent at the KVTU, he joined the Institut khimicheskoy fiziki (Institute of Chemical Physics). In February of 1935 he became a professor at and later (1938) head of the Moskovskiy khimiko-tehnologicheskiy institut im. D. I. Mendeleyeva (Moscow Chemical Engineering Institute). Dur-

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I. 37703-65

ACCESSION NR: AP5006706

In the 35 years of his scientific career, V. K. Andreyev published some 150 papers. He studied extensively the combustion of explosives, and the kinetics and mechanism of their thermal decomposition; the transition of explosive materials from ignition and detonation; the detonation capability of explosive materials; their sensitivity to mechanical interactions; the production of explosive decomposition products during explosions; the theory of explosion safety; and the like. His main concern centered around the main point - the theory of combustion of explosives. He was the first to study, more than 30 years ago, the combustion of secondary explosives. In the thirties and forties he designed now universally accepted instruments for the study, at constant pressure, of the combustion of explosives. He established differences in the combustion capability of various explosives and proposed, as a criterion, the critical combustion diameter. He formulated qualitatively the concept of ignitability of explosives and soon discovered the parallelism between the ignitability and combustion capability. He was one of the first to study the transition from combustion to explosion experimentally. In the mid-forties he observed the self-agitation during the combustion of liquid explosives experimentally, which had been predicted theoretically L. D. Landau. In contradistinction to numerous researchers abroad, Andreyev also studied the thermal decomposition of mononitrates at that time and investigated nitroglycerin, nitroglycol, nitrocellulose, and the like. He showed that the decomposition of polynitrates is actually a

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ACCESSION NR: AP5006706

multistage process. His contributions to the theory of explosives are of such importance that he may rightly be considered the founder of this important branch of science. In 1960, together with A. F. Belyayev, he published the basic textbook on the theory of explosives. During his pedagogical career, Prof. Andreyev taught hundreds of engineers and sponsored some 25 doctoral candidates. He was honored by receiving several high decorations.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: CO, WA

NO REF Sov: 000

OTHER: 000

(Card 3/3 Rev)

ACC NR: AM7003136

Monograph

UR/

Andreyev, Konstantin Konstantinovich

Thermal decomposition and combustion of explosives (Termicheskoye razlozheniye i goreniye vzryvchaykh veschestv) 2d ed., rev. and enl. Moscow, Izd-vo "Nauka", 66, 0345 p. illus., biblio. Errata slip inserted. 2,700 copies printed. (At head of title: Akademiya nauk SSSR. Sibirskoye otdeleniye)

TOPIC TAGS: combustion, explosive, thermal decomposition, condensed substance, condensed system, stable combustion, unstable combustion, steady state combustion, nonsteady state combustion, chemical transformation, ignition point, flammability

PURPOSE AND COVERAGE: This book essentially presents a review and summary of experimental and theoretical findings obtained in the field of combustion processes in explosives. The author, who died before completing his review of the book for publication, was one of the foremost Soviet specialists in the field, and many of the findings and basic principles cited in the book are either his or those of his school. This is particularly true with respect to the material on the theory of combustion and thermal disintegration of secondary explosives, and the analysis of critical phenomena and the physical essence of the difference

Card 1/3

UDC: 541.427.6:541.126+542.92

ACC NR: AM7003136

between the properties of a number of explosives. Briefly summarized, the book is concerned with the principal forms of explosives and their capacity for chemical conversion (i.e., stable combustion, nonsteady state combustion, and detonation), the main problems of chemical kinetics in the initiation and development of an explosion as a function of changes in temperature, and the slow combustion of (principally) condensed substances. The book is intended for students, engineers and scientific workers specializing in physical chemistry and chemistry. The following persons were mainly responsible for preparing the original manuscript for publication: B. S. Svetlov (chapters 1 and 2), A. P. Glazkova (chapter 3), and B. N. Kondrikov (chapters 4, 5, and 6). A. I. Gol'binde (deceased) participated in the preparation of the book for publication.

TABLE OF CONTENT [abridged]:

Editor's note -- 3

Foreword -- 5

Ch. 1. General characteristics of explosives and the principal forms of their

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ACC NR: AM7003136

Chemical conversion -- 7

Ch. 2. Slow chemical conversion of explosives -- 12

Ch. 3. Stable combustion of explosives -- 101

Ch. 4. Theory of steady-state combustion of explosives -- 260

Ch. 5. Unstable combustion of explosives -- 294

Ch. 6. Flash and flammability of explosives -- 311

Literature -- 339

SUB CODE: 21 / SUBM DATE: 11Jul66 / ORIG REF: 167 / OTH REF: 197

Card 3/3

ANDREYEV, K.M., inzh.; CHUDIN, S.N., inzh.

System for signalling the appearance of water in ship compartments.  
Sudostroenie 30 no.9:55-56 3 '64. (MIRA 17:11)

33553  
S/135/62/000/002/009/010  
A006/A101

12300

AUTHORS: Andreyev, K. P., Boyko, V. R., Engineers

TITLE: Multi-pass argon-arc welding of AMg 6 (AMg6) aluminum alloy structures

PERIODICAL: Svarochnoye proizvodstvo, no. 2, 1962, 33-34

TEXT: Multi-pass welding of 15 - 30 mm thick AMg6 alloys was performed with tungsten electrode, 5 - 6 mm in diameter, in argon atmosphere, on a-c. The same alloy was used for the filler wire, 5 - 6 mm in diameter. This large diameter reduced the hydrogen content in the seam on account of moisture adsorbed on the wire surface. The chamfer angle was 90°. The following technology was employed: pass one is performed with 400 - 500 amps current, without filler wire. This assures complete fusion of the edges in the weld root due to low flashing and deepening of the liquid pool into the base material zone (for strap welds) or through-welding (for butt welds). During heating the oxide film in the weld zone is fused from the bottom, and the arc and argon flow pressure produces a pool with a concave surface. The reciprocal motion of the torch promotes mixing of the molten metal and the oxide film on the surface, facilitat-

Card 1/2

ANDREYEV, K.P.

Basis of optimum technological systems for the continuous cultivation  
of feed yeasts. Gidrolik. i lesokhim. prom. 17 no.5:3-6 '64.  
(MLRA 17:1C)  
1. Gosudarstvennyy nauchno-issledovatel'skiy institut gidrolyznoy i  
sul'fitno-spirtevoy promyslennosti.

ANDREYEV, K.P.

Automatic distribution of the flow of containers from the main  
to the side conveyors. Ferm. i spirt.prom. 30 no.4:30-32 '64.  
(MIRA 18:12)

1. Leningradskiy nauchno-issledovatel'skiy institut pishchevoy  
promyshlennosti.

"APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R000101520001-1

新嘉坡，即今之新加坡，是南洋重要貿易中心，亦為我國南洋貿易之發源地。

Thus, CSM can be used to predict the effect of a change in one variable on another.

1. The following is a list of the most common types of software used in business.

APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R000101520001-1"

ANDREYEV, K.

CA

Calculation of the adulteration of sweet alcoholic products. K. Andreyev, *Sparto-Vodochnyi Prom.* 14, No. 8, 13-16 (1937); *Chem. Zentr.* 1938, II, 438. In determining the contraction, the value of the "nonvolatile vol." of the sugar syrup, which is due to the hydration of the sugar molecules, is to be considered. This vol. is not concerned in the soln. of the spirit and therefore produces no contraction. In a sugar syrup of 30°Bé, this vol. amounts to 0.06 vol. %; in a 40°Bé. syrup it is 0.1 vol. %. This value gives a lower contraction value than that of Wustenfeld and indicates a different water admixt. W. A. M.

16

AIR SEA METALLURGICAL LITERATURE CLASSIFICATION

HNDKEYE, K.

Determining extractives in fruits and berries. K. Andreev. *Spiral. Vodochazay* Prom. 17, No. 1-2, 13-14 (1940).—Hot-water extn., by a method similar to that used for detg. sugar in beets, is recommended for improved accuracy and convenience in detg. extractives in fruits. Extn. was effected on a water bath at 65°, and the required extn. time was ascertained by refractometric detn. It was found that 2 hrs. at 40-65° insures complete extn. Pectin is dead in the extn. by prunes, with KOH. J. F.S.

MONKIN, E. J.

Monkin, E. J. "The Implications of Soviet Nuclear Power in the Long-Term Nuclear Future," *Strategic Review*, Vol. 1, No. 1, p. 1-12.

cc: Monkin, E. J., *Scientific Journal of the USSR*, Vol. 1, No. 1.

Chemical Abst.  
Vol. 48 No. 6  
Mar. 25, 1954  
The Fermentation Industries

Selection of methods of washing yeast. K. P. Andreev,  
*Tsentr. Leningrad. Tekhnol. Inst. Pishchevoj Prom. I (IX),*  
73-6(1954). - The effects of periodic and continuous washing  
of yeast were studied. Continuous washing required 2.474  
- 2.759 times more water than periodic washing to obtain the  
same degree of purity of yeast. The amt. of energy re-  
quired for washing yeast, the duration for filling the separa-  
tors, and the loss of yeast by continuous washing are also  
2.5-2.70 times higher than by periodic washing. Also from  
the viewpoint of diffusion and desorption periodic washing  
should be preferred. The difference of the contents of the  
washed materials on the surface of the yeast cells and of the  
medium surrounding them also makes the periodic washing  
preferable. Emanuel Merdinget

ANDREYEV, K.P.

POPOV, V.I.; DOBROSERDOV, L.L.; STABNIKOV, V.N.; ANDREYEV, K.P.;  
ZNAMENSKIY, G.M., professor, retsenzent; SKOBLO, D.I., kandidat  
tekhnicheskikh nauk, retsenzent; SEREGIN, P.V., kandidat  
tekhnicheskikh nauk, retsenzent; IZRAILEVICH, L.A., inzhener,  
retsenzent; MASLOVA, Ye.F., redaktor; DUBOVKINA, N.A., tekhnicheskiy  
redaktor.

[Technological equipment for fermentation industries] Tekhno-  
logicheskoe oborudovanie brodil'nykh proizvodstv. Moskva.  
Pishchepromizdat, 1953. 515 p. (MLRA 7:8)  
(Distilling industries) (Brewing industries)

ANDREYEV, K.P., glavnnyy inzhener.

Bleaching wood pulp with sodium hydrosulphite. Bum.prom. 28 no.7:29-30  
Jl '53. (MLRA 6:7)

1. Bumazhnaya fabrika "Kohila". (Wood pulp industry) (Bleaching)  
(CA 47 no.22:12809 '53)

ANDREYEV, K. P.

AID - P-92

Subject : USSR/Chemistry

Card : 1/1

Authors : Andreyev, K. P., and Tsirlin, Yu. A.

Title : Study of compositions of liquid-vapor equilibrium phases in the system furfural-methanol-water

Periodical : Zhur. Prikl. Khim. 27, no. 4, 402-412, 1954

Abstract : The system methanol-furfural-water may be considered as a binary system consisting of methanol and water-furfural. Five references (four U.S.S.R.): 1929-1951. Six tables; 5 graphs.

Institution : None

Submitted : September 29, 1952

ANDREYEV, K. P.

USSR/Chemical Technology - Chemical Products and Their Application. Wood Chemistry Products. Cellulose and Its Manufacture. Paper, I-23

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 63359

Author: Andreyev, K. P., Vorob'yev, S. N., Zelenshchikova, A. V., Ivanovskiy, N. A., Khelemskaya, V. A.

Institution: None

Title: Fermentation-Liquor Rectification Apparatus for Sulfite-Alcohol Plants

Original

Periodical: Gidroliznaya i lesokhim. prom-st', 1955, No 2, 5-7

Abstract: A 5-column fermentation liquor rectification apparatus has been developed for the distillation of sulfite fermentation liquor, which permits to recover, in addition to high grade ethyl alcohol, methanol suitable for the production of formalin, and an ether-aldehyde fraction (EAF) containing (in %) ~20 acetaldehyde, <6 methanol and 60-65 ethyl alcohol. EAF can be utilized in the production of furniture lacquer with aldehyde resin base or returned to fermentation department to reduce losses of alcohol.

Card 1/1

ANDREYEV, K. P.

✓ Continuous fermentation of sulfite liquor. M. V. Ch.  
Kalyuzhnyj, K. P. Andreev, N. A. Ivanovskij, and N. V.

Mgl'chakov. Gidroks. i Lesokhim. Prom. 8, No. 4, 7-10  
(1955).—Compared were 3 systems of fermentation of sulfite liquors which contained, on the av., around 2% of fermentable sugars. In one installation the liquor to be fermented and wort (I) was charged into a 200-cu. m. fermentation tank (II) and a light current of air was bubbled through the tank. It was pumped from the bottom of II over an inclined fine-mesh Cu-wire cloth. Fibers and yeast attached to them were returned to II, while the fermented mash III was transferred to a collector. Another installation consisted of II and 2 smaller sedimentation tanks where I was left to settle for 30 min., after which the substrate was decanted and the sediment returned to the main tank. In a third modification the settling tank was provided with an agitator. III was pumped off the top, and the sediment was returned to II. The highest yield and the greatest time saving was achieved in the first case. The problem of wire corrosion, however, has presented a serious problem.

T. Jurcic

NY  
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ANDREYEV, K.P.

A continuous method of fermentation of hydrolyzed wood,  
K. P. Andreyev and G. V. Bolotina: *Cidrolis. i Lenkhim*,  
Prom. 8, No. 7, 5-7(1955).—A continuous fermentation  
process is described. For this purpose 2 new genera of  
branched-type yeast were cultivated (Av-I and Lv-4),  
and their multiplication const. ( $k$ ) was detd. The rate of  
feed of the fermentation liquor (I) is given by the equation  
 $y$  (cu.m./hr./cu.m. of tank vol.) =  $kx/ac$ , where  $x$  is the  
concen. of the yeast in I in kg./cu. m.,  $a$  is the increase of  
the fermentation mass in kg./kg. of the fermented sugar  
(II), and  $c$  is the amt. of II in kg./cu. m. The app. consists  
of a preheater, 2 fermentation tanks in series, and a conical  
settler from which the sediment is returned to the 1st fer-  
mentation tank. Characteristic for the above yeasts is  
that they grow very rapidly, sorb colored bodies from the  
fermentation mass, and settle quickly. T. Jurecic

ALL-UNION Sci Res Inst. Hydrolysis & Sulphite Alcohol Ind.

ANDREYEV, K. P.

USSR/Chemical Technology - Chemical Products and Their Application. Wood Chemistry  
Products. Cellulose and Its Manufacture. Paper, I-23

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 63354

Author: Kalyuzhnnyy, M. Ya., Andreyev, K. P.

Institution: None

Title: Fermentation of Sulfite Liquor with Separation of Fermented Liquor

Original

Periodical: Tr. In-ta lesokhoz. problem AN Latv. SSR, 1955, 8, 105-110

Abstract: It is recommended to utilize in fermenting sulfite liquor a continuous rapid method of fermentation with re-use of the yeast separated from the fermented liquor. Fermentation must be carried out in 2 component fermentation series with a 5:1 ratio of starting to finishing fermentation tanks. With optimal yeast concentration of 15-18 g/l fermentation proceeds better and is completed in 6 hours. One kg of separated yeast ferments on the average 4.5 kg sugar per day, and during fermentation the amount of yeast increases by 0.1-0.15 kg per one m<sup>3</sup> of liquor, on the basis of absolutely dry yeast. Separation method of

Card 1/2

ANDREYEV, K.P.; ZELENSHCHIKOVA, A.V.; IVANOVSKIY, N.A.; PRAKH'YE, I.S.

Reducing steam consumption in the distillation of beer. Gidreliz.  
i lesokhim. prom. 9 no.1:12-14 '56. (MLRA 9:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrolyzacy i sul'fitno-spirtevoy promyshlennosti (for Andreyev, Zelenchikova)
2. Syas'skiy tselyulozno-bumazhnyy kombinat (for Ivanovskiy, Prakh'ye).  
(Distillation apparatus)

ANDREYEV, K.P.

Means for reducing steam consumption during the distillation of  
beer. Gidroliz.i lesokhim.prom. 10 no.4:6-8 '57. (MLRA 10:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy i  
sul'fitno-spirtovoy promyshlennosti.  
(Distillation)

ANDREYEV, K.P.; BOBOREKO, E.A.; IGNAT'YEV, I.S.; ZELENSHCHIKOV, A.V.;  
BELYAYEVSKIY, I.A.; SHIRYAYEV, A.M.; SAPIRO, M.M.

Steam injection cooling of stillage. Gidroliz. i lesokhim. prom.  
10 no.7:30-32 '57. (MIRA 10:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy i  
sul'fitnospirtovoy promyshlennosti (for Andreyev, Boboreko,  
Ignat'yeva, Zelenshchikova). 2. Leningradskiy godroliznyy zavod  
(for Belyayevskiy, Shiryayev, Sapiro).  
(Alcohol)

*Andreyev K.P.*  
ANDREYEV, K. P., Leningrad.

"Use of Continuous Culture Method for Alcoholic Fermentation of Mashes of Soft Wood Hydrolysates,"

report submitted for the Symposium on Continuous Cultivation of Microorganisms,  
Czech. Acad. of Sci., Prague CSR, 23-28 June 1958.

ANDREYEV, K. P.

AUTHOR: Alferov, V. V. 044/30-79-7-48/60

TITLE: Continuous Fermentation and Breeding of Microorganisms  
(Neperyvnoye brosheniye i vyrashchivaniye mikroorganizmov)

PERIODICAL: Vestnik Akademii nauk SSSR, 1959, Nr 2, pp 106-108 (USSR)

ABSTRACT: The Institut mikrobiologii Akademii nauk SSSR (Microbiological Institute of the Academy of Sciences, USSR) convened a conference from October 13 to 15, 1958 which dealt with the investigation of some working results in this field as well as with the discussion of a further intensification of the productions based on the activity of microorganisms. The conference was attended by more than 200 representatives of academic and scientific branch research institutes, enterprises, sovkhozes, universities, as well as foreign scientists. The following lectures were heard:  
N. D. Iyerusalimsky spoke of the theoretical foundation of the method of continuous microbe breeding and its prospects of application in the microbiological industry.  
Ye. A. Pavlak, Vsesoyuznyy nauchno-issledovatel'skiy institut khlebopekarney proseyshchennosti (All-Union Scientific Research Institute of Bread-Production Industry) dealt with the problem of the breeding of yeast in solutions containing molasses.  
F. N. Fisher, E. P. Andreyev, V. A. Ulenkova, M. Ya. Indjushny and A. P. Kruchikova, Vsesoyuznyy nauchno-issledovatel'skiy institut gidrolizny i sulfithno-spirtovoy proseyshchennosti (All-Union Scientific Research Institute for the Industry of Hydrolysis and Sulphite Spirits) evaluated the theoretical and practical work in the field of continuous fermentation of wood hydrolysates and sulfite liquor as well as their utilization for obtaining fodder yeast.  
V. L. Marsova, Krasnoyarskiy gidrolyzny sawm (Krasnoyarsk Hydrolysis Plant) said that the introduction and completion of the continuous process of yeast breeding made it possible to increase the output of yeast factories by ten times.  
V. L. Yarmaska, A. L. Malchenko, Vsesoyuznyy nauchno-issledovatel'skiy institut spirtovoy i likero-vodochnoy proseyshchennosti (All-Union Scientific Research Institute of the Spirit, Liqueur and Brandy Industry), V. M. Makhaonovich, Dokshuninskaya nauchno-issledovatel'skaya laboratoriya (Dokshuninskaya Scientific Research Laboratory) reported on the experiment of applying the method of continuous fermentation

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Card 2/4

Continuous Fermentation and Breeding of Microorganisms ECT-SC-55-2-1a 60

of the starchy raw material and syrup in the alcohol and acetone-butanol industry.

S. A. Konovalov, All-Union Scientific Research Institute of the Alcohol, Liqueur and Brandy Industry reported on the problems of antisepsics in fighting infection due to ferments. L. Yu. Madzinakaya, Institut mikrobiologii Akademii nauk USSR (Microbiological Institute of the AS USSR) reported on the investigation of the morphological and physiological properties of yeast.

A. D. Kovalenko, Andrushevskiy spirtovoy zavod (Andrushevka Distillery), N. Ya. Savchenko, Xalo-Viskovskiy spirtovoy zavod (Xalo-Viskovskiy Alcohol-Distiller), N. I. Unikarova, Smolenskiy Sovnarkhoz (Smolensk Sovnarkhoz) reported on some working results obtained by distilleries in the syrup fermentation by using the method of continuous flow.

M. S. Loytayanskaya, Leningradskiy universitet (Leningrad University) characterized the correlation of reproduction processes and biochemical activity of acetic acid bacteria in the high-speed production of vinegar.

N. M. Meronova, Microbiological Institute of the AS USSR spoke of the possibility of obtaining vitamin B<sub>12</sub> by continuous breeding of propionic acid bacteria (propionovokislyye bakterii). S. L. Brinberg, O. Z. Grahovskaya, Vsesoyuznyy nauchno-issledovatel'skiy Institut antibiotikov (All-Union Scientific Research Institute of Antibiotics) reported on the application of this method in the production of penicillin.

V. F. Yatskina, All-Union Scientific Research Institute of the Spirit, Liqueur, and Brandy Industry showed that the method of semi-continuous breeding of the fungus Aspergillus niger accelerates fermentation. B. V. Perfil'yev, Leningrad University reported on the results of investigations of the natural microflora by the method of capillary microscopy which he had developed.

V. A. Karidym, Kiev University demonstrated his new batcher for continuous breeding of microorganisms in laboratory practice.

J. Vintik and J. Kudica (Czechoslovakia) expressed their opinions on the methods of continuous breeding of micro-organisms.

On this Conference it was pointed to the necessity of organizing the industrial production of cultures for continuous fermentation.

Card 4/4

~~DOREYEV, K.P., kand.tekhn.nauk~~

Theory of the continuous alcohol fermentation process of  
wood hydrolyzates and sulfite liquors. [Trudy] NTO bum.i  
der.prom. no.8:208-213 '59. (MIRA 16:2)  
(Woodpulp industry...By-products)  
(Fermentation)

ANDREYEV, K.P.; VLADIMIROVA, N.I.; REZUKHINA, A.V.; ZINGEL', M.A.;  
FINKEL', G.M.

Flotation method of isolating yeasts from yeast beer.  
Gidroliz.i lesokhim.prom. 13 no.3:11-14 '60.  
(MIRA 13:7)

1. Nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-  
spiritovoy promyshlennosti (for Rezukhina). 2. Sukhonskiy  
sul'fitno-spiritovoy zavod (for Finkel').  
(Yeast) (Flotation)

POPOV, Vladimir Il'ich, prof.; DOBROSEDOV, Leonid Leonidovich; STABNIKOV,  
Vsevolod Nikolayevich; ANDREYEV, Konstantin Petrovich; SOKOLOV,  
A.Ya., prof., retsentent; AZRIYELOVICH, S.S., kand.tekhn.nauk,  
retsentent; KHMEL'NITSKAYA, A.Z., red.; KISINA, Ye.I., tekhn.red.

[Technological equipment of fermentation industries] Tekhno-  
logicheskoe oborudovanie predpriatii brodil'noi promyshlennosti.  
Izd.4., perer. i dop. Moskva, Pishchepromizdat, 1961. 447 p.  
(MIRA 15:5)

(Brewing industry--Equipment and supplies)  
(Distilling industries--Equipment and supplies)

ANDREYEV, K.P.

Regular growth of fodder yeasts in hydrolysis media. Gidroliz.  
i lesokhim. prom. 14 no.5:3-6 '61. (MIRA 16:7)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut gidrolyznoy  
i sul'fitnospirtovoy promyshlennosti.  
(Yeast) (Hydrolysis)

ANDREYEV, K.P.

Rate of biosynthetic processes in aerobic reproduction of *Torulopsis utilis* yeasts in media containing various sugars. Mikrobiologiya 30 no.2:315-322 Mr-Ap '61. (MIRA 14:6)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-spirtovoy promyshlennosti (NIIGS). (YEAST)

SEKUNOVA, V.N.; BOLONDZ', G.V.; ANDREYEV, K.P.; ABRAMOVICH, M.M.

Enrichment of fodder yeasts with antibiotics and vitamin B<sub>12</sub>.  
Gidroliz.i lesokhim.prom. 15 no.3:3-5 '62. (MIRA 15:5)

1. Nauchno-issledovatel'skiy institut gidroliznoy i  
sul'fitnospirovoy promyshlennosti.  
(Yeast as feeding stuff) (Antibiotics) (Cyanocobalamin)

STEPANOV, I.A.; ANDREYEV, K.P.; USHAKOV, Ye.N.

Automatic distribution of containers on a conveyer moving  
toward bottle-washing machines. Spirt.prom. 28 no.2:20-24  
'62. (MIRA 15:3)

1. Leningradskiy kholodil'nyy institut (for Stepanov). 2. Lenin-  
gradskiy likero-vodochnyy zavod (for Andreyev, Ushakov).  
(Leningrad--Liquor industry--Equipment and supplies)

ANDREYEV, K.P.; LEYKIN, V.L.

Automatic screening section. Spirt.prom. 28 no.2:25 '62.  
(MIRA 15:3)

1. Leningradskiy likero-vodochnyy zavod.  
(Leningrad--Liquor industry--Equipment and supplies)

ANDREYEV, K.P.; TITMAN, B.A.

Spring head for clamps. Spirt. prom. 28 no.6:20-21 '62.  
(MIRA 16:10)

1. Leningradskiy likero-vodochnyy zavod.

AZRIYELOVICH, S.S.; ANDREYEV, K.P.

Complete mechanization of the container shops in the "Vena"  
Brewery in Leningrad. Ferm. i spirt. prom. 30 no.7-21-23  
'64 (MIRA 18-2)

1. Leningradskiy nauchno-issledovatel'skiy institut pishchevoy  
promyshlennosti.

ANDREYEV, K.P.

Rate of biomass synthesis in the continuous cultivation of  
fodder yeasts. Mikrobiologija 32 no.6:1059-1065 N. D. '60  
(MIRA 1871)

Г. Gosudarstvennyy nauchno-issledovatel'skiy institut hidro-  
tiznay i sul'fitno-spirtevoy promyshlennosti, Leningrad.

ANDREYEV, K.P.; SEMUSHINA, T.N.; MONAKHOVA, N.I.

Return of post-yeast mashes for sulfite liquor dilution in yeast production. Sbor. trud. NIIGS 12:113-123 '64.

(MIRA 18:3)

ANDREYEV, K. P.

ANDREYEV, K. P. (Bashkir Scientific Research Veterinary Experimental Station).  
Clinico-epizootic peculiarities of composite course of infectious anemia  
and nutrialliosis.

Source: Veterinariya; 4-5; April/May 1945 uncl  
TAICCN

ANDREYEV, K.P.

"On the Vaccination in the USA of grown cattle against brucellosis with the Strain No.19.(Journal Amer. Med.Vet.Ass., October 1944).

(Review by ANDREYEV, K.P.)

SO: Veterinariya; Vol. 23; No. 1; January 1946; uncl

TABCON

ANDREYEV, K. P.

ANDREYEV, K. P. (Head of the Department of Epizootiology and zoohygiene, Ivanovo Agricultural Institute.) On current disinfection.

To: Veterinariya; 23; (-9); August/September 1946; bndl.  
TABCON

ANDREYEV, Y. P.

27268. ANDREYEV, Y. P.-- Problema devastatsii infektsiy i vorozsy pl-nirovaniya  
prativozooticheskikh meropriyatiy. Veterinariya, 1987, No 9, S. 12-14.

SS: Lato: is' Zhurnal'nykh Statey. Vol. 30. 1986

ANDREYEV, N. P.

Catarrh

"Infectious catarrh of the upper respiratory passages of horses and measures of controlling it." Veterinaria 29, No. 7, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952. Unclassified.

Andreev, K. I., it. au.

Infektsionnye bolezni i svinej: manual for veterinarians and specialists in swine breeding.  
Izd. 4. Kirov, Gos. izd-vo sel'khoz. lit-ry, 1954. 556 s. (55-50824)

SF971.A5 1954

Infektsionnye bolezni...1954 (Card 2, 55-50824)

1. Swine - Diseases. 2. Communicable diseases in animals. I. Andreev, K.I., it. au.

ANDREYEV, K. P.  
USSR/Medicine - Veterinary

FD 321

Card 1/1

Author : Andreyev, K. P. and Anishchenko, A. K.

Title : DDT and hexachlorocyclohexane (GKhTsG) to frighten away insects

Periodical : Veterinariya, 6, 52, June 1954

Abstract : The authors state that they found DDT and GKhTsG dusts are not too effective in protecting horses against pests like gnats, malanders, and horse-flies. Use of DDT and GKhTsG sprays in combination with soap "K", naphthalene, and iodoform did not increase their repellent action. The authors think that a search for new methods of pest control should be stepped up to alleviate the harm done by blood-sucking insects and other insect pests.

Institution : State Institute of Veterinary Dermatology, Ministry of Agriculture, USSR

Submitted :

ANDREYEV, K.P.; MITROFANOV, A.M.

Insecticide smoke to control bloodsucking Diptera and ticks on  
livestock farms. Veterinariia 32 no.4:78-82 Ap '55. (MLRA 8:5)

1.Gosudarstvennyy institut veterinarnoy dermatolegii Ministerstva  
sel'skogo khozyaystva.  
(INSECTICIDES) (DIPTERA) (TICKS)

ANDREYEV, K.P.

Measures of controlling blood sucking insects. Veterinariia 33 no.4:  
63-69 Ap '56. (MLRA 9:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut veterinarnoy ektoparazitologii, mikologii i sanitarii.  
(Insects, Injurious and beneficial) (Diptera)

ANDREYEV, K. P.

✓ Benzene hexachloride smoke—a new agent against  
Argas persicus. K. P. Andreev, M. V. Voronin, and A.  
M. Mitrofanov. Veterinarija 33, No. 5, 82-5(1958).  
Satisfactory field trials are reported on control of *A. persicus*  
by the use of BHG smoke bombs in aviaries. G. M. K.

3

ANDREYEV, Konstantin Pavlovich

[Protection of animals from flying bloodsucking insects] Zashchita  
zhivotnykh ot krovososushchikh letaiushchikh nasekomykh. Maskva,  
Dos. izd-vo selkhoz lit-ry, 1957. 31 p. (NIRA 10:11)  
(Domestic animals--Diseases and pests)

Andreyev, K.P.

ANDREYEV, K.P.; MITROFANOV, A.M.

Use of NBK (0-17) benzene hexachloride pots in controlling blood-sucking insects out of doors. Med.paraz.i paraz.bol. supplement to no.1:4-5 '57. (MIEA 11:1)

1. Iz otdela entomologii Instituta veterinarnoy dermatologii Ministerstva sel'skogo khozyaystva SSSR.  
(BENZENE, HEXACHLORIDE)  
(INSECTS, INJURIOUS AND BENEFICIAL)

ANDREYEV, K.P.

ANDREYEV, K.P.; MITROFANOV, A.M.; PAVLOV, S.D.

Control of malarial mosquitoes through MBK (3-17) benzene hexachloride  
pots. Med.paraz. i paraz.hol.supplement to no.1:5 '57. (MIR 11:1)

1. Iz Instituta veterinarnoy dermatologii Ministerstva sel'skogo  
khozyaystva SSSR.  
(BENZENE HEXACHORIDE)  
(MOSQUITOES--EXTERMINATION)

USSR/Zooparasitology. Ticks and Insects--Vectors of  
Causative Agents of Diseases

G

Abs Jour : Ref Zhur-Biol., No 13, 1958, 57944

Author : Andreyev K. P., Zhukova L. I., Anishchenko A. K.,  
Inst : All-Union Scientific Research Institute of  
Veterinary Sanitation and Ectoparasitology  
Title : Data on Parasitism of the Gadfly and other pa-  
rasitic Insects in Horses

Orig Pub : Tr. Vsec. n.-i vet. sanitarii i ektoparazitol.,  
1957, 11, 221-235

Abstract : Results of the studies of the effect of attacks  
by gadflies, mosquitos, gnats, lice, and mites  
on horses in the Gavrilovo-Posadskiy and Kine-  
shemskiy Rayons, Ivanovskaya Oblast. A method  
whereby the sanguinorous insects were collected  
in hoppers suspended on horses was used for the

Card 1/2

10

ANDREYEV, K.P., prof.; YANOVICH, G.I., kand.vetnauk; KUDRYAVTSEVA, G.A.;  
SOBOLEV, R.G., kand.biol.nauk

New insect repellants for protecting people and animals from  
bloodsucking insects. Trudy VNIIVSE 13:152-172 '58.

(MIRA 11:12)

(INSECT BAITS AND REPELLENTS)

ANDREYEV, Konstantin Pavlovich, doktor veterin.nauk; BABKINA, N.G., red.;  
MAKHOVA, N.N., tekhn.red.; DEYEVA, V.M., tekhn.red.

[Protection of animals against flying bloodsucking insects and  
warble flies] Zashchita zhivotnykh ot krovososushchikh leta-  
iushchikh nasekomykh i kozhnykh ovodov. Izd.2., ispr. i dop.  
Moskva, Gos.izd-vo sel'khoz.lit-ry, 1959. 43 p. (MIRA 13:8)  
(Agricultural pests) (Diptera)

MITROFANOV, A. M.; ANDREYEV, K. P.

Primenenie aerozolei dlya bor'by s ektoparazitami zhivotnykh v pomeshcheniyakh. Tezisy doklada. Application of aerosols for the control of indoor ectoparasites. Theses of a report.

Trudy Vsesoyuznogo Nauchno-Ispytatel'nogo Instituta Veterinarnoi Sanitarii. Iizd. 9-11. 1959; (Referat. Zhur., Biol., 1960. No. 30991.)

POLYAKOV, D.K.; IVASHKOV, I.S.; ANDREYEV, K.P.; VORONIN, M.V.; POTAPOV, D.I.

Effectiveness of chlorophos and other preparations in hypoder-  
mosis in cattle. Veterinariia 37 no.4: 71-74 Ap'60.

(MIRA 16:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut veterinarnoy  
sanitarii.

(CHLOROPHOS) (WABBLE FLIES)

ANDREYEV, K.P., prof.; ZAKAMYL'DIN, I.A., aspirant

Polychloropinene emulsion for the protection of animals against  
bloodsucking insects. Veterinarniia 37 no.2:79-83 Ag '60.  
(MIRA 15:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut veterinarnoy  
sanitarii.

(Pinene) (Insects baits and repellents)

ANDREYEV, K. P. (Professor)

"Insecticides for pest and tick control in the U.S.A. Review of foreign literature".

Veterinariya, Vol. 38, No. 2, 1961, p. 90.

ANDREYEV, K.P., prof.; ZAKAMYRDIN, I.A., aspirant

Hexamethylene benzamide (Hexamid B), a new repellent against horse-flies. Veterinaria 38 no.6:68-69 Je '61. (MIRA 16:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut veterinarnoy sanitarii.

(Horseflies) (Hexamid)

ANDREYEV, K.P.; VRANCHAN, Z.E.

Ecology of Musca domestica L. on livestock farms. Med.paraz.  
i paraz.bol. 30 no.1:64-66 Ja '61. (MIRA 14:3)

1. Iz laboratorii entomologii i dezinsekttsii Vsesoyuznogo nauchno-  
issledovatel'skogo instituta veterinarnoy sanitarii (dir. insti-  
tuta - prof. A.A. Polyakov, zav. laboratcrei - prof. K.P.  
Andreyev).

(FLIES)

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CIA-RDP86-00513R000101520001-1

ALL INFORMATION CONTAINED  
HEREIN IS UNCLASSIFIED

DATE 10-10-01 BY SPK/AM/MSB  
INSTRUCTIONS FOR THE ATTACHMENT OF AN ANIMAL  
TO A SPY GLASS. THIS PAPER WAS WRITTEN BY DR. WALTER  
H. REED, JR., AND DR. ROBERT M. SCHAFFER.  
(CIAKA 15:1)

APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R000101520001-1"

July 1, 1911, Boston, Mass.

Table 1. The effect of the addition of various organic solvents on the viscosity of  $\text{PVC}$  at a shear rate of  $10 \text{ sec}^{-1}$ .

• The bottom right portion is the most difficult to identify, as it is very faint.

**APPROVED FOR RELEASE: 03/20/2001**

CIA-RDP86-00513R000101520001-1"

CHREYEV, K.P.

Return container receiving and counting system, term, i spirit, prop.  
31 no. 420-22 '65. (MIRA 1815)

1. Leningradskiy mehotraslevyy nauchno-issledovatel'skiy institut  
pishchevoy promyshlennosti.

AZRIYEVICH, G.S.; ANDREYEV, K.P.

Alkali pump station for bottle washing machines. Ferm. i spirt. prom.  
Tl no.4:28-30 '65.  
(MIRA 18:5)

Leningradskiy mezhotreslevyy nauchno-issledovatel'skiy institut  
ishchevoy promyshlennosti.

ANDREYEV, K.P., prof.; MIATIN, M.G., prof.; IVASHKOV, I.S., nauchnyy  
sotrudnik; SMIRNOV, V.T., aspirant

Chlorophos in the prophylaxis of hypourinesis. Veterinaria 41  
no.2:44-45 F '65. (MIRA 18:3)

I. Vsesoyuznyy nauchno-issledovatel'skiy institut veterinarnoy  
sanitarii.

SKRIPNIK, M, voditel' trolleybusa na marshrute No.15 (g.Kiyev); SALIMOVA, G., voditel' tramvaya na marshrute 47; ANDREYEV, L., voditel' trolleybusa na marshrute No.25; SULATSKIY, I., voditel' trolleybusa na marshrute No.24; RAZMEROV, A., voditel' tramvaya na marshrute No.8 (g.Leningrad)

Passenger transportation without using conductors. Zhil.-kom.khoz.  
10 no.10:9-10:10 '60. (MIRA 13:10)

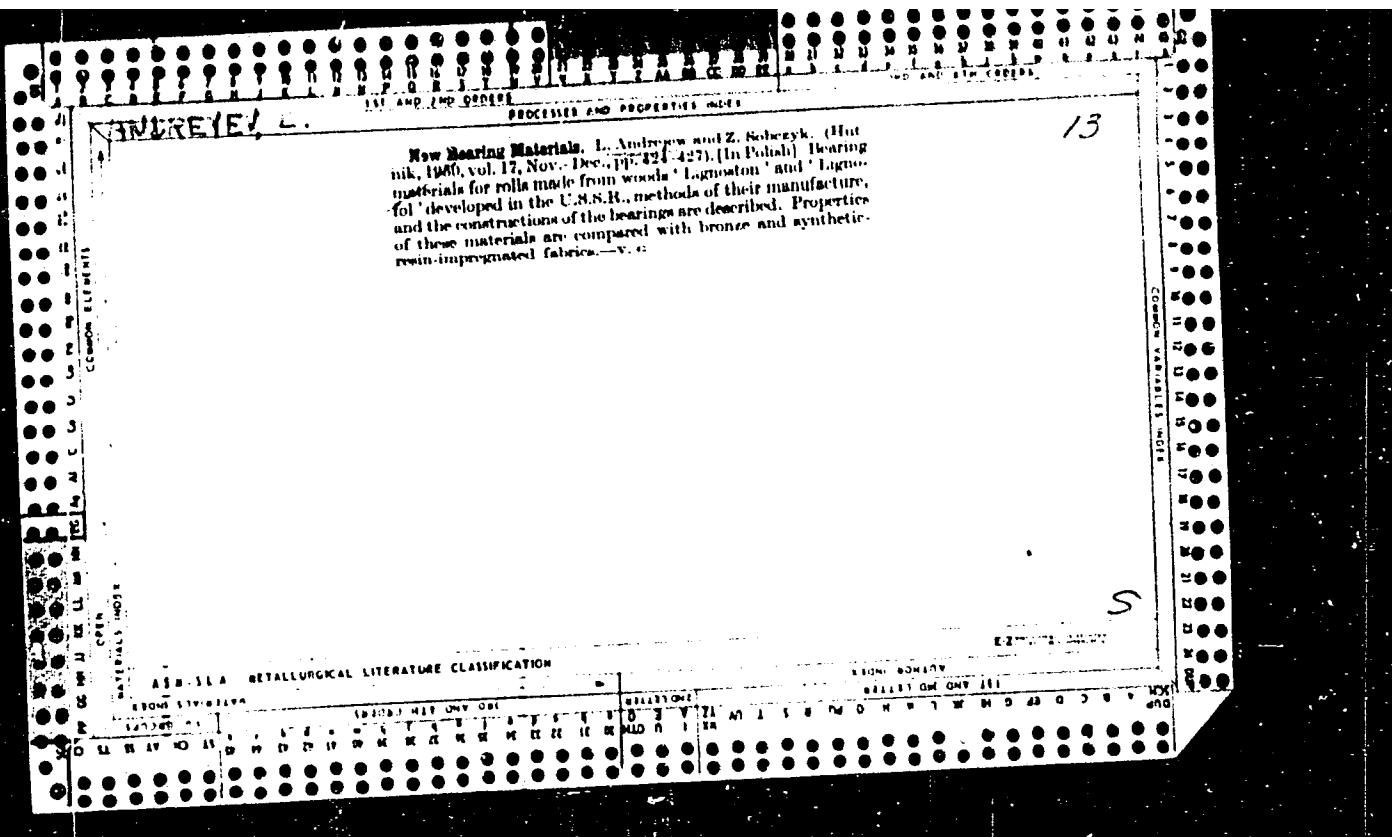
1. Depo im. Anakova, g.Moskva (for Salimova). 2. Vtoroy trolleybusnyy park, g. Moskva (for Andreyev). 3. Vtoroy trolleybusnyy park, g. Moskva (for Sulatskiy).

(Local transit)

AND. YEV, L.

Okhota bez ruzh'ia. Bor'ba s gryzunami vrediteliami sel'skogo khoziaistva.  
[Hunting without a gun; fighting agricultural rodent pests]. Moskva, Molodaia  
gvardiia, 1953. 64 p.

SO: Monthly List of Russian Accessions, Vol. 6 No. 12 March 1954.



ANDREYEV, L.

The Hardening of Cast Iron Roller Surfaces. L. Andreyev.  
(*Foundry News*, Stalingrad), 1953, (1), 24-27; *Met. u. Masseryechnye*  
Techn., 1954, 4, July, 324-326. A new method for hardening  
cast-iron rollers is described. Rotary furnaces are used;  
a method has been developed suitable for hardening cast  
iron with the following composition: C 3.2-3.5%, Si 1.5-  
2.0%, Mn 0.7-0.8%, P 0.4-0.5%, S 0.12%; for rolls 280,  
330, and 500 mm. in dia. The depth of the hardened zone  
was 18-30 mm.—L. J. L.

ANDREYEV, L.

The First Large Soviet Mill. L. Andreiev (Udachik, 1934, 21, (12), 409-776). (In Russian). A description of a large rolling mill which was built entirely in the U.S.S.R. is given. The products made by this mill include rails with tensile strength up to 80 kg./sq. mm.; 10 ft. 25 in. long (weight 43.75 kg./m.) beams and other heavy sections with strengths up to 60 kg./sq. mm.

ANDREYEV, L.

Conference of the coordinating council on the problem "Improving production administration and mechanizing administrative work." Biul.nauch. inform.: trud i zar. plata 4 no.2:56-59 '61. (MIRA 14:3)  
(Industrial management) (Office equipment and supplies)

ANDREYEV, I., voditel' trolleybusa

Trolley-bus driver. Zhil.-kom. khoz. 12 no.9:19-20 S '62.  
(MIRA 16:2)

1. Vtoroy trolleybusnyy park g. Moskvy.  
(Trolley buses)

ANDREYEV, L.A.

Materials for studying functional changes of the central nervous  
system in senile people. Trudy fiziol. lab. i no.1/3:74-82 '53  
(MIRA 9:5)  
(NERVOUS SYSTEM) (AGED) (CONDITIONED RESPONSE)

ANDREYEV, L., voditel' trolleybusa (Moskva); BUTUSOV, S.; BEZENCHUK, N.;  
NIKOLAYEV, G.

Materials from the Third Congress of Trade Unions. Zhil.-kom.  
khoz. 12 no.6:3-5 Je '62. (MIRA 15:12)

1. Ministr kommunal'nogo khozyaystva RSFSR (for Butusov).
2. Predsedatel' Ukrainskogo respublikanskogo komiteta professional'-nykh soyuzov (for Bezenchuk). 3. Predsedatel' Leningradskogo oblastnogo komiteta professional'nykh soyuzov (for Nikolayev).  
(Trade unions--Congresses)

A.  
ANDREYEV, L., inzhener; VILENKINA, N., inzhener.

Using soil cement bricks in building. Gor.i sel'.stroi. no.4:15-17  
Ap '57. (MIRA 10:5)

(Building blocks) (Foundations)  
(Soil cement)

ANDREYEV, Lev Aleksandrovich, glavnnyy inzhener; LOTYSHEV, I.P., red.;  
KHLOBORDOV, V.I., tekhn.red.

[Using soil-cement blocks in the building of houses] Stroitel'stvo zhilykh domov iz gruntosementnykh blokov. Krasnodarskoe knizhnoe izd-vo, 1958. 26 p. (MIRA 12:5)

1. Trest "Krasnodarkraystroy" (for Andreyev).  
(Soil cement) (Building blocks)

ANDREYEV, L.A.; TUGARINOV, N.I.; YEREMIN, A.A.

Highly productive equipment for the study of gas corrosion.  
Trudy Inst.fiz.khim. no.7:105-106 '59. (MIRA 13:5)  
(Gases)  
(Corrosion and ant corrosives--Testing)

18 (7)

AUTHORS: Tomashov, N. D., Andreyev, L. A.,  
Isayev, N. I.05727  
SOV/32-25-10-16/63

TITLE: Comprehensive Investigation of Stress-Corrosion Cracking Processes

PERIODICAL: Zavodskaya laboratoriya, 1959, Vol 25, Nr 10, pp 1200 - 1203  
(USSR)

ABSTRACT: A device and a suitable method for simultaneous microscopic and electrochemical investigation of stress-corrosion cracking processes were developed. The device includes a tensile-testing machine with a visual and measuring recording system. Axial tensile loads up to 250 kg can be applied; the total electrode potential of the metal, and the potentials in the resulting cracks, are automatically recorded, and visual observation of the propagation kinetics of cracks is possible. The tests are carried out in a corroding medium which is constantly renewed. The loading (stretching) takes place in the tensile-testing machine (Fig 1) by means of a metal spring, and is adjusted by a set wheel. Visual observation of the sample (of cracks) is done by a microscope of type MIS-11. The tensile-testing machine was adjusted by a dynamometer of type DS-1. Immediately before the test loading, the corroding liquid was put on the

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Comprehensive Investigation of Stress-Corrosion Cracking  
Processes 05727  
SOV/32-25-10-16/63

celerates the third one. The results obtained confirm the assumption of a film-electrochemical mechanism of stress corrosion cracking. There are 3 figures and 2 references, 1 of which is Soviet.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry of the Academy of Sciences, USSR)

Card 3/3

HANDWRITING

## PAGE I BOOK INFORMATION

Tomashev, N. D., Doctor of Chemical Sciences, Professor, ed.

Korroziya i zashchita konstrukciy i metallicheskikh materialov: sbornik statey (Corrosion and Protection of Metal Structures). Collection of Articles. Moscow, 1962. 258 p. Errata slip inserted. 10,000 copies printed.

M. G. Publishing House: M. G. Tsvetnoye Tech. Ed.: O. V. Sazanova; Managing Ed. for Literature on Chemical and Tertile Machine Building: V. V. Ryabkova, Engineer.

PURPOSE: This collection of articles is intended for scientific and technical personnel concerned with the corrosion and protection of metals.

CONTENT: The collection deals with problems of the corrosion of constructional metals in various environments and conditions. Articles discuss new methods for the investigation and testing of corrosion and give results of recent research conducted on the corrosion and protection of metal constructions. The corrosion of some new alloys is also considered. The collection includes articles generalizing the results of research conducted during the last 2-3 years in the Department for Corrosion of Metals of the Moscow Institute of Steel (Second Steel Institute). Some of the articles were written in cooperation with the laboratory staffs of the "Serp 1 Molot" Plant and Marchakovsky заводы named M.I. Kalinin (Chemical Plant) and M.K. Kalinin) and are based on investigations conducted at those plants. No personalities are mentioned. There are 219 references, Soviet and non-Soviet. References are accompany each article.

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## Corrosion and Protection (Cont.)

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S/137/61/000/011/101/123  
A060/A101

AUTHORS: Tomashov, N.D., Andreyev, L.A.

TITLE: Oxidation of titanium at high temperatures

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 11, 1961, 46, abstract  
11I308 (V sb. "Korroziya i zashchita konstrukts. metallich. materi-  
alov", Moscow, Mashgiz, 1961, 127 - 132)

TEXT: A study was performed of the oxidation kinetics of Ti mark BT -1Д (VT-1D) in the interval 800-1,150°C in gaseous mixtures of O<sub>2</sub>+N<sub>2</sub> in various proportions. Under soakings longer than one hour the oxidation follows a linear law in the entire temperature range under investigation. For 1,000°C a functional dependence was obtained of the oxidation-rate constant, characterizing the linear portion of the kinetic curve, on the partial pressure of O in the gaseous mixture. The kinetics of O dissolution in the metallic base was studied for the temperature of 1,000°C. It is assumed that the oxidation process is controlled by the O diffusion into the metallic base of the specimen. There are 8 references. X

[Abstracter's note: Complete translation]

Ye. Layner

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S/81/61/003/010/018/036  
B111/B138

AUTHORS: Andreyev, L. A., and Palinge, Ya.

TITLE: Effect of deformation on the work function of monocrystalline molybdenum filaments

PERIODICAL: Fizika tverdogo tela, v. 3, no. 10, 1961, 3076-3082

TEXT: The effect of deformation on the work function was determined in high vacuum ( $5 - 2 \cdot 10^{-8}$  mm Hg) by measuring the contact potential using the vibrating chord method. The work function was found to decrease in uniaxial elongation. Tests were conducted at different deformation rates (1.2 - 30 mm/min). The measuring setup based on the principle of a vibrating capacitor formed by two MK(MK) molybdenum filaments (specimen and reference electrode)  $50\mu$  in diameter, which were placed in a vacuum vessel. The static capacitance of the capacitor was 4 pf. To remove impurities, the filaments were first annealed at  $1000^{\circ}\text{C}$  in hydrogen, then at  $1800 - 1900^{\circ}\text{C}$  in vacuum to produce the granular structure. The use of

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## Effect of deformation on the work ...

the molybdenum filaments as electrodes made it easier to produce a pure metal surface and to effect the deformation. The filaments were made to vibrate by ponderomotive forces (alternating current 300 - 500 cps), which varied capacity by 0.02 pf at most. The potential difference between the molybdenum filaments for different tubes was  $\pm$  50 mv, and was measured with an error of 0.01 v. The measured values indicated that the work function  $\Delta\phi$  increased with elongation  $\Delta l/l$ . At 5% deformation,  $\Delta\phi$  ranged between 40 and 60 mv for all specimens. At first, in the elastic range  $\Delta\phi$  hardly changed at all, then, with further deformation, it rose slowly, then rapidly, and finally slowly again. It made no difference whether the elongation was continuous or discontinuous.  $\Delta\phi$  remained constant for several hours after stress was relieved. Tests made with oxidized monocrystalline molybdenum filaments produced almost equal  $\Delta\phi = f(\Delta l/l)$  curves. At a deformation rate of 30 mm/min,  $\Delta\phi$  was observed to rise steeply at the same  $\Delta l/l$  values as with lower rates (6 and 1.2 mm/min). The region of the steepest rise of  $\Delta\phi$  shifted in this case to smaller  $\Delta l/l$ . This may be explained by the effect of the deformation rate on the microstructure of the filament surface. Professor A. A. Zhukhovitskiy is thanked for discussions. There are 7 figures and 12 references: 2 Soviet and 10 non-Soviet. The three most recent references to English-language publications read as follows:

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S/181/61/003/010/018/036  
Effect of deformation on the work ... B111/B138

E. N. Clarke, H. E. Farnsworth, Phys. Rev., 85, no. 3, 484, 1952. - T. J. Lewis. Proc. Phys. Soc., 67B, no. 3, 187, 1954. - G. Wallis, H. E. Farnsworth. J. Appl. Phys., 27, no. 6, 594, 1956.

ASSOCIATION: Moskovskiy institut stali im. I. V. Stalina  
(Moscow Steel Institute imeni I. V. Stalin)

SUBMITTED: May 16, 1961

Fig. 1. Diagram of measuring arrangement

Legend: (1) tungsten spring; (2) transverse bar for regulating distance between filaments; (3), (7) molybdenum filaments; (4) getter flask; (5) tantalum getter; (6) glass branch; (8) glass tube with sliding iron core; (9) tungsten spring for regulating filament deflection; (10) external contact; (11) contact for vacuum-evaporated films; (12) tube wall. (1) Junction "A"; (2) top view of junction "A". All data are in mm.

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3/032/62/028/008/005/014  
B104/B102

AUTHOR: Andreyev, L. A.

TITLE: Improved method of using two vibrating chords to measure difference of contact potentials

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 8, 1962, 962 - 965

TEXT: Difference of contact potentials was measured by J. G. Potter (Phys. Rev., 58, 623 (1940)) with a dynamic capacitor consisting of two parallel wires. This scheme is used here (Fig. 1) for studying how the degree of deformation affects the work function of a metal. The capacitance of the system, consisting of two Mo wires, is periodically changed by vibration of the reference wire (§). The vibration (300-500 cycles) is produced electromagnetically. The wires are of 50  $\mu$  diameter, have a reference length of 8 cm and are 0.5 - 0.6 mm apart. Their capacitance is 4-6 pico-farad and the periodic changes in this amount to 0.02 picofarad. In the experiment the wire was stretched at  $(5-2) \cdot 10^{-8}$  mm Hg and the work function of the metal was determined as a function of the degree of deformation. Within the limit of elastic deformation the work function remains constant;

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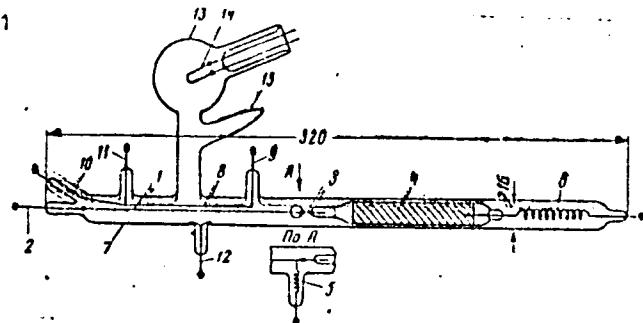
Improved method of using ...

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during plastic deformations it changes (Fig. 4). The type of the work-function change is independent of whether the load is applied continuously or step by step. The work-function characterizes the degree of surface defectiveness. There are 4 figures.

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Fig. 1



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Fig. 4

